

ABSTRACT OF THE DISCLOSURE

The present invention relates to an apparatus and method for manufacturing molten iron. The method for manufacturing molten iron includes producing a mixture containing iron by drying and mixing iron-containing ore and additives; passing the mixture containing iron through one or more successively-connected fluidized beds so that the mixture is reduced and calcined to thereby perform conversion into a reduced material; forming a coal packed bed, which is a heat source in which the reduced material has been melted; charging the reduced material to the coal packed bed and supplying oxygen to the coal-packed bed to manufacture iron; and supplying reduced gas exhausted from the coal-packed bed to the fluidized bed, wherein in the conversion of the mixture to a reduced material, oxygen is directly supplied and combusted in an area where reduced gas flows to the fluidized bed. The apparatus for manufacturing molten iron of the present invention uses this method for manufacturing molten iron. Through use of the present invention, the reduced gas passing through the fluidized beds may be improved, and cohesion of the iron-containing fine ores may be prevented.